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Strengthening INSPIRE MANAK Awards Participation in Tribal Schools under the Yawal Project Office, Jalgaon District, through Administrative, Teacher, and Student Support

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Abstract
The INSPIRE MANAK Award scheme, administered by the Department of Science and Technology in collaboration with the National Innovation Foundation - India, seeks to foster scientific creativity and innovation. Factors such as awareness, teacher support, access to resources, language, relevance to daily life, and institutional support influence student participation. This study examines student participation in the INSPIRE MANAK Award programme among students from tribal schools in Yawal project office, Jalgaon district, Maharashtra.
This study examines students' understanding of idea generation and the programme's nomination process, as well as the institutional and educational factors shaping participation. It emphasises the roles of teachers, access to learning materials, gender-related opportunities, and the significance of indigenous knowledge and community experiences in scientific innovation. Using a qualitative case study approach, the research draws on interviews with students, teachers, head teachers, and education officials, as well as school observations and programme records. The data inform an analysis of enabling and constraining factors, programme objectives, and available school support. The study aims to advance a more inclusive perspective on school innovation by showing how institutional support and culturally relevant approaches can increase tribal participation in scientific innovation.

Keywords: INSPIRE MANAK awards, Tribal Students Participation, STEAM Education and Scientific Innovation.

Introduction

Science education fosters curiosity, critical thinking, problem-solving, creativity, and the ability to address everyday challenges. Today's educational methods place greater importance on deep understanding than on simple memorisation, focusing on observation, experimentation, questioning, and practical application. STEAM education comprising science, technology, engineering, arts and mathematics promotes this shift by helping students examine problems, develop solutions, test ideas, and connect scientific concepts to real-life situations. Improving STEAM education in India is necessary to encourage innovation and enable students from all walks of life to contribute to the country's scientific and technological progress.

Students do not have equal opportunities to take part in science and innovation. Whether they participate depends on the availability of learning resources, teacher quality, students' language proficiency, access to laboratories and technological facilities, the support they receive from families and communities, and their opportunities to exchange ideas. Tribal and remote communities often face difficulties, including poor infrastructure, teacher shortages, language barriers, and a scarcity of educational opportunities. It is therefore necessary for any analysis of student involvement in science and innovation or in STEAM education to take into account the students' own interests as well as the policies of the programmes and the institutional factors which encourage the development and spread of ideas.

The INSPIRE MANAK Awards scheme gives school students a platform to spot everyday problems, develop new ideas, and take part in organised scientific activities. By examining how the scheme has been implemented in tribal schools in the Yawal PO area of Jalgaon district, Maharashtra, one can understand the connections between science education, student involvement, support from administration, teachers and institutions and the incorporation of local knowledge.

Overview of INSPIRE MANAK Award Program

The Innovation in Science Pursuit for INSPIRE MANAK Award Program is a major initiative by the Department of Science and Technology, Government of India. The INSPIRE MANAK (Million Minds Augmenting National Aspiration and Knowledge) Award Programme is run by DST with the National Innovation Foundation, India (NIF). The program encourages students to think creatively and supports ideas that solve real problems and help communities. It identifies students' original ideas and helps develop promising innovations through exhibitions, contests, and mentoring.

The program asks students to find problems in their surroundings and suggest creative solutions using science or technology. These solutions can relate to farming, household work, environmental protection, accessibility, local jobs, health, sanitation, and daily issues. Schools should give students chances to share their ideas, organise idea contests, and nominate the best proposals through the program website. Chosen students receive financial support to turn their ideas into models and can advance to district, state, and national exhibitions and contests if they follow the rules.

This program is important not just for recognising award winners. It gives students opportunities to observe their surroundings, spot real problems, ask questions, think creatively, and use scientific thinking. The program values students' ideas and supports their creativity. It also deepens learning, motivates teachers, and turns ideas into practical models.

A key point is that the scheme measures more than students' general interest in science. Instead, it provides clear steps to turn original ideas into formal nominations. Participation involves awareness, idea generation, encouragement, selection, nomination, and opportunities for further development.

Literature Review of Study

1. STEAM Education and Student Participation in India

STEAM education prompts students to examine problems, conduct experiments, develop solutions, and apply their scientific knowledge in real-life contexts. NEP 2020 and the National Curriculum Framework for School Education strongly emphasise inquiry-based, experiential, and competency-oriented learning (Ministry of Education, 2020; NCERT, 2023). Involvement in STEAM goes beyond attending classes or performing well in examinations; it also means asking questions, exchanging ideas, conducting investigations, and developing solutions. As part of innovation programmes, participation also involves

becoming aware of issues, generating ideas, proposing projects, receiving mentoring, and improving proposed solutions. Nevertheless, these opportunities can vary from school to school because resources, teaching methods, and institutional support differ. Therefore, examining student participation in the INSPIRE MANAK Awards program can help us understand how schools enable students to take part in scientific inquiry and innovation.

2. Tribal Education and Access to Scientific Innovation

Social, cultural, linguistic, economic, and geographical conditions shape tribal students' educational experiences. A study of tribal education in Maharashtra shows that school facilities, teaching methods, family circumstances, and the broader educational environment matter (Jha et al., 2017). These factors can also affect access to science-related activities and innovation programs. A lack of learning materials, insufficient mentoring, or limited information about available opportunities may limit students' participation. On the other hand, tribal students' everyday experiences with agriculture, natural resources, local technologies, and community practices can provide useful starting points for scientific inquiry. Hence, the main issue is not whether tribal students have the potential for innovation, but whether schools provide opportunities for them to identify, develop, and express their ideas.

3. Maharashtra and the Context of Yawal Integrated Tribal Development Office, Jalgaon

Maharashtra provides an important context for examining educational opportunities among tribal communities. Studies of tribal education in the state indicate the need to understand schooling in relation to local social conditions, educational resources, and institutional practices (Jha et al., 2017). The study examines selected government tribal schools in the Yawal project office area of Jalgaon district to understand how students experience the INSPIRE MANAK Awards program. The local context allows the researcher to examine students' awareness, teachers' roles, school-level nomination procedures, and students' access to learning materials. It also enables the researcher to examine whether students' everyday experiences and community knowledge influence the innovative ideas they develop. By conducting fieldwork and reviewing relevant school records, the researcher will identify the specific circumstances affecting participation in the schools under study.

4. Indigenous Knowledge and Scientific Innovation

Indigenous and community-based knowledge develops through interactions with local environments and everyday practices. Knowledge about agriculture, plants, water, soil, weather, and resource management can provide starting points for scientific questions and innovative solutions. NEP 2020 recognises the educational significance of Indian knowledge systems, while Tigga and Krishnan (2025) explore opportunities to integrate tribal knowledge into elementary science education. Such integration can connect formal scientific concepts with students lived experiences. However, researchers should not automatically treat traditional practices as scientific innovations; they can explore potential applications through observation, evidence, and investigation. This study will examine whether students draw on local environmental knowledge and community experiences when developing ideas for INSPIRE MANAK Awards and how schools respond to these ideas.

5. Role of Teachers in Encouraging Participation

Teachers play an important role in translating innovation programmes into meaningful learning opportunities. In the INSPIRE–MANAK Awards Programme, they may inform students about the scheme, encourage problem identification, organise idea-generation activities, guide proposal development, and facilitate nominations. Through questioning, feedback, and discussion, teachers help students connect everyday observations with scientific concepts. The National Curriculum Framework for School

Education emphasises inquiry and evidence-based reasoning (NCERT, 2023). In tribal schools, teachers may also need to recognise students' home languages, cultural experiences, and local knowledge as learning resources. However, their ability to provide support may depend on training, workload, resources, and familiarity with the programme. This study will examine teachers' awareness, pedagogical practices, mentoring, and challenges in supporting students' participation.

6. Institutional Support, Resources, Language and Gender

Students' participation in innovation programmes depends on more than individual interest. Schools need to provide information, opportunities to share ideas, assistance with nominations, learning materials, and appropriate guidance. Language may influence students' ability to explain observations and communicate proposed innovations, particularly when formal school communication differs from their preferred language (Jhingran, 2009). Gender may also shape encouragement, access to materials, and opportunities to participate in science-related activities. Researchers should investigate these differences rather than assume them. Institutional support includes head teachers' and education officials' roles in communicating programme information and facilitating participation. This study will examine how resources, language practices, gender-related opportunities, and school-level arrangements enable or constrain tribal students' involvement in the INSPIRE –MANAK Awards Programme.

7. Implementation Challenges and Student Participation in the INSPIRE-MANAK Scheme: Evidence from Jammu and Kashmir.

Mir, S. H., Shakeel, S., & Mir, S. A. (2026) examined how the INSPIRE MANAK scheme was implemented in the districts of Baramulla, Shopian, and Anantnag in Jammu and Kashmir, highlighting issues with student awareness, participation, teacher preparedness, and institutional support. Their research revealed a big gap between students' knowledge of the programme and their actual registration, indicating that increasing awareness alone does not lead to students getting involved in innovation-related activities. Schools played an important role in providing information, but inadequate teacher training, poor mentoring, time constraints, and limited resources hindered the scheme's effective implementation. The findings also underlined the need for systematic awareness campaigns, opportunities for teacher capacity building, and stronger institutional mechanisms to help students develop and submit innovative ideas. The studies show that INSPIRE MANAK's successful implementation depends not only on programme guidelines but also on the support available at the school level. However, these conclusions apply only to districts in Jammu and Kashmir and cannot be simply applied to Maharashtra's tribal areas. This study, conducted in the Yawal Project office of Jalgaon District, examines tribal students' participation levels, nomination patterns at the school level, differences between Ashram and other schools, and the extent of institutional support. This study aims to identify context-specific barriers and opportunities for promoting equitable participation in the programme.

Theoretical Framework

This study is mainly based on Amartya Sen's Capability Approach (1999), a theoretical perspective suitable for examining how tribal students participate in the INSPIRE MANAK programme in Yawal Block, Jalgaon District, Maharashtra. The approach distinguishes between the availability of opportunities and individuals' real capabilities to access and use them. In the INSPIRE MANAK programme, students may have innovative ideas and creative potential, but their involvement depends on their access to information about the programme, guidance from teachers, encouragement from their parents, available school resources, and administrative support. These factors can affect whether students' ideas are noticed,

developed, nominated, and selected at various stages of the award process. The Capability Approach also enables an examination of inequalities in participation across schools, especially between Ashram schools and other school types, and helps identify institutional obstacles that could restrict tribal students' opportunities. Using this framework, the study goes beyond simply counting nominations and selections to investigate whether students have meaningful chances to showcase their creativity and take part in innovation activities. Thus, the framework allows analysis of the connection between institutional support, educational equity, and students' opportunities to develop and demonstrate their innovative skills.

Research Objective and Questions

The study aims to examine how administrative support, teacher engagement, and student involvement can strengthen participation in the INSPIRE MANAK Awards programme among students in government tribal schools. It seeks to understand the institutional and pedagogical factors that influence students' opportunities to identify problems, develop innovative ideas, and engage in scientific activities. The study also explores teachers' role in building awareness, providing guidance and mentoring, and connecting scientific learning to students' everyday experiences and indigenous knowledge. It also investigates resource availability in schools, administrative support, and gender-related factors that may influence participation. By examining these dimensions, the study aims to identify gaps between program objectives and implementation in tribal school contexts and suggest strategies to make participation more inclusive and meaningful.

The study is guided by research questions that explore students' awareness of and participation in the INSPIRE MANAK Awards program in government tribal schools and examine how administrative support, teacher motivation, mentoring, and institutional resources influence their involvement. It further investigates the challenges students and teachers face in identifying, developing, and submitting innovative ideas. The study also seeks to understand how students' everyday experiences, local environmental knowledge, and indigenous practices can be integrated into innovation-based learning. Finally, it examines strategies to strengthen institutional support and promote equitable participation, particularly among girls and other underrepresented students, in the INSPIRE Awards MANAK programme.

Methodology

The study uses a mixed-methods approach to examine how administrative support, teacher engagement, and student involvement can strengthen participation in the INSPIRE MANAK Awards programming students in Government Tribal Schools. It follows a single-site pilot intervention design with mixed-methods evaluation, implemented under the Integrated Tribal Development Project (ITDP), Yawal, in Jalgaon district, Maharashtra. Quantitative data examine participation-related indicators, while qualitative data explore administrative facilitation, teacher support, student involvement, and barriers encountered during the participation process. The intervention focuses on strengthening participation beyond registration by examining the interconnected roles of administrative support, teacher engagement, and student involvement in facilitating participation in INSPIRE MANAK Awards. Where baseline and post-intervention data are available, changes in relevant indicators are examined descriptively.

The study setting comprises 76 schools under the Yawal Project Officer (PO) context, including 17 Government Tribal Schools, 31 Government-Aided Primary Schools, and 28 Government-Aided Secondary Schools. However, the pilot intervention focuses specifically on the 17 Government Tribal

Schools and excludes the government-aided schools from the intervention sample. The study selected Yawal as the pilot setting for the initial implementation of the participation-strengthening programme among the identified Government Tribal Schools. The study examines how administrative coordination, teacher preparedness, and student participation interact to create opportunities for engagement in the scheme. The mixed-methods evaluation allows the study to describe participation-related outcomes alongside stakeholders' experiences and implementation challenges. This approach provides a context-specific understanding of the processes and support mechanisms that may strengthen tribal students' participation in school-based scientific innovation.

Intervention Framework and Implementation in the Yawal ITDP

The intervention aimed to increase student involvement in the INSPIRE MANAK Awards program in government tribal schools participating in the Yawal Integrated Tribal Development Project (ITDP) in Jalgaon district, Maharashtra. Instead of viewing participation as simply consisting of the submission of nominations, the intervention took a multi-level approach which acknowledged the interconnected responsibilities of project-level administration, school leadership, teachers and students in promoting participation in innovation-based learning; it looked at the whole process, starting with administrative coordination and raising awareness and then moving on to teacher sensitisation, student mentoring, the identification of local problems, the development of innovative ideas and the preparation of the nominations.

The Yawal ITDP was deliberately chosen as the pilot case. Initially, we implemented the intervention in 17 government tribal schools, and then secured school-level data from 14 of them. As a result, the final sample for analysis consisted of these 14 schools, giving a school-level data availability rate of 82.35 per cent. We classified the data from the other three schools as unavailable or non-responding. We did not treat their status as evidence that they did not participate, that their students had no ideas, or that they failed to submit nominations. This distinction was important to ensure accurate participation-related findings.

The intervention took place within the wider administrative and educational structure of Maharashtra's Tribal Development Department, which carries out educational programmes for students from Scheduled Tribes through Ashram Schools, hostels, and other institutional arrangements. The department's educational objectives are to improve education quality, enhance physical infrastructure, and provide learning resources. In this context, the Yawal ITDP served as the administrative setting for examining how institutional support could promote student involvement in the INSPIRE MANAK Awards. The intervention focused on the coordination and support needed to turn programme opportunities into meaningful engagement at the school level.

Administrative Support and Coordination

The initial part of the intervention focused on administrative support and institutional coordination. The ITDP/project office and relevant administrative staff supported communication between the project administration and the schools that took part in the programme. The administrative support involved spreading programme information, communicating instructions, encouraging schools to get involved, coordinating follow-up activities, and, where possible, resolving administrative or technical difficulties. The study examined this support to see how institutional assistance could create opportunities for teachers

and students to take part in the programme. It also examined whether communication and follow-up procedures helped schools understand the participation process and complete the required documentation.

Teacher Orientation and Pedagogical Support

The second part of the programme examined the role of school heads, science teachers, and other teachers involved in the INSPIRE MANAK Awards Programme. Because teachers were key to turning the programme's objectives into practical activities at both the classroom and school level, the intervention framework examined teacher awareness and motivation, student identification, mentoring, idea refinement, and support in preparing innovation synopses and making nominations. The study paid special attention to teachers' ability to link scientific thinking with students' everyday lives, local environmental issues, and indigenous knowledge. Students' experiences related to agriculture, water management, biodiversity, household practices, and community life could serve as contexts for identifying problems and developing innovative solutions. The study also examined how teachers supported this process and the difficulties they encountered in providing guidance, technical assistance, and follow-up.

Student Involvement and Innovation Development

The third element focused on students taking an active part in the innovation process, seen as participants and potential innovators rather than passive recipients of information about the program. The framework examined their level of involvement at each stage: spotting problems in their environment, generating ideas, discussing possible solutions, refining their ideas with teachers' help, preparing synopses, and participating in the nomination process. It also considered that access to mentoring, learning materials, opportunities to discuss ideas, confidence in putting forward ideas, and encouragement from teachers could affect how students participated. The study also analysed differences in participation by gender and variations in student engagement. With this approach, the study could determine whether institutional support and teaching methods gave students the opportunity to show their creativity and produce innovations relevant to their own context.

Monitoring, Documentation and Evaluation

The study used administrative records, school-level data, responses from teachers and headmasters, student feedback, and records related to the orientation, mentoring, idea development, and nomination processes. The quantitative analysis examined frequencies, percentages, and school-level comparisons, covering school participation, teacher engagement, student involvement, the number of ideas produced and developed, and the number of nominations submitted. In cases where comparable baseline and post-intervention data were available, the changes in the participation indicators were described descriptively. The qualitative responses were analysed thematically in order to identify the factors which enabled the intervention, the difficulties encountered during implementation, and the gaps between the support provided by administration and what took place in the classrooms.

The intervention framework moved from administrative coordination to involving teachers, mentoring students, developing ideas, and submitting nominations. This sequence allowed assessment of how far participation had advanced or stalled. Because the study focused on a single ITDP pilot and data were available from 14 of the 17 schools, the findings were interpreted descriptively and contextually rather than as proof of definite causal effects or as indicative of state wide representativeness. The intervention aimed to examine how coordinated administrative support, teacher guidance, and genuine student

involvement could enhance opportunities for tribal students to participate in the INSPIRE MANAK Awards Programme.

Result and Discussion

1. School Participation and Administrative Challenges

The results show that of the 15 Government Ashram Schools in 11 blocks of Jalgaon district, 9 schools completed the INSPIRE MANAK Awards nomination process and provided the necessary information for the study, giving a school participation rate of 60 per cent. The other six schools (40 percent) did not complete the process. Participation was likely affected by a combination of logistical difficulties and administrative problems, such as students being unavailable during holidays and festivals; teachers having other obligations related to election duties; delays in obtaining bank account details; the need for documentation; and trouble accessing their previously registered portal accounts.

Sr. No.	Block	Number of Ashram Schools
1	Amalner	1
2	Bodwad	1
3	Chalisgaon	1
4	Chopda	3
5	Dharangaon	1
6	Erandol	1
7	Jamner	1
8	Muktainagar	1
9	Pachora	1
10	Raver	1
11	Yawal	3
		15

Figure 1 – Participating schools in the research that provided the information.

Sr. No.	Block	Number of Ashram Schools
1	Amalner	1
2	Bodwad	1
3	Chalisgaon	1
4	Chopda	3
5	Dharangaon	1
6	Erandol	1
7	Jamner	1
8	Muktainagar	1
9	Pachora	1
10	Raver	1
11	Yawal	3
		15

Figure 2 - The mentoring programme facilitated the first-time registration of the following 8 Government Ashram Schools on the INSPIRE MANAK Portal.

This shows that access to an online nomination platform alone does not guarantee successful participation; it requires coordinating the efforts of students, teachers, headmasters, and district-level authorities, as well as timely access to the information and documents required for submission. The Department of Science and Technology (DST, n.d.) describes INSPIRE MANAK as an initiative designed to encourage original, science-based ideas which meet societal needs and to promote an innovative culture among school students. As a result, administrative and technological obstacles at the nomination stage may limit students' opportunities to take part in such initiatives.

Sr. No.	Reason	Impact on Participation and Nominations
1	Student unavailability during vacations	Students were unavailable during school vacations and festivals, including Bail Pola and Raksha Bandhan. This affected student participation and the completion of nomination activities.
2	Teachers' engagement in SIR and election duties	Teachers and school management were engaged in SIR-related work and election duties as Booth Level Officers (BLOs), reducing the time available for student mentoring and nomination activities.
3	Immediate unavailability of bank account details	Some schools could not provide the required bank account details immediately, delaying completion of the nomination process.
4	Previous registration and password-reset difficulties	Two schools had already registered previously but did not participate in the password-reset or regeneration process required to proceed with nominations.
5	Issues with the registered email address	One school had an unknown or inaccessible email address associated with its previous registration. The school management did not proceed with a new registration or contact the district authorities to resolve the issue.

Figure 3 - Summary of School Nominations: 9 out of 15 Ashram Schools

The results support the general educational view advanced by the Organisation for Economic Co-operation and Development (OECD), the view being that creativity and critical thinking should be developed in schools through supportive environments, suitable teaching methods, and institutional arrangements which encourage students to explore and build on their ideas (Vincent-Lancrin et al., 2019). Given this, the 60% completion rate suggests that we need to improve implementation procedures rather than treating incomplete nominations as evidence of low student interest. Participation in future nomination cycles may increase by providing early communication, collecting student information in advance, offering help with account recovery, and coordinating with school and district authorities.

2. Student Nominations: Gender, Social Category and Grade Representation

According to the study's student list, 43 students from nine Government Ashram Shala schools in Yawal Project Officer (PO), Jalgaon district, were nominated for the INSPIRE MANAK Awards Program. Of these, 23 were girls (53.5%), and 20 were boys (46.5%). All 43 students were recorded under the Scheduled Tribe (ST) category. This representation is significant because it documents tribal students' participation in a formal innovation initiative and shows that students from these schools are engaging with opportunities to identify and address practical problems through original ideas.

Sr. No.	School Name	Block (Taluka)	Total Nomantion Done
1	Govt. Ashram School, Sonbardi	Erandol	5
2	Government High School, Valthan	Chalisgaon	5
3	Government Secondary Ashram School, Sarve BK	Pachora	5
4	Government Secondary Ashram School, Vishnapur	Chopda	5
5	Government Secondary Ashram School, Devziri	Chopda	5
6	Govt. Ashram School, Palaskheda	Bodwad	3
7	Govt. Secondary Ashram School, Chandsar	Dharangaon	5
8	Government Secondary Ashram School, Lalmati	Raver	5
9	Govt. Secondary and Higher Secondary Ashram School, Waghzira	Yawal	5
	Total		**43**

Figure 4. – School list and their nominations.

Sr. No.	Category	Number of Students
1	Total Students Nominated	43
2	Boys	20
3	Girls	23
4	Students from ST Category	43

Figure 5 – Overall student statistics

Sr. No.	Grade	Number of Students
1	Grade 6	9
2	Grade 7	4
3	Grade 8	13
4	Grade 9	6
5	Grade 10	11
	Total	**43**

Figure 6 – Grade-wise student count.

Grade 8 had the greatest number of students, amounting to 13 (30.2%), then came Grade 10 with 11 (25.6%), followed by Grade 6 with nine (20.9%), Grade 9 with six (14.0%), and finally Grade 7 with four (9.3%). This distribution shows that participation is spread across five grade levels, but the relatively higher numbers in Grade 8 and Grade 10 should be examined more closely. However, the data currently available do not show whether these differences were due to variations in enrolment, student interest, teacher encouragement, or the availability of good ideas.

The same data show that girls made up a slight majority of nominated students. Yet, without corresponding enrolment figures and information on those eligible but not nominated, it cannot be established that girls had better access to the programme than boys. Likewise, the fact that all nominated students were from the ST category reflects the makeup of the Ashram Schools rather than showing that the programme was more inclusive of different social groups.

The official INSPIRE-MANAK framework aims to encourage school students to develop original ideas with scientific and societal applications (DST, n.d.). The nominations from Jalgaon show how relevant this aim is in the context of tribal residential schools, since the students' everyday experiences can serve as meaningful starting points for scientific inquiry and problem-solving.

3. The distribution of student innovation ideas by theme

The nominated project ideas addressed a wide range of practical issues related to students' homes, schools, livelihoods, and the communities around them. The topics covered were water filtration and conservation, waste management, agriculture, food processing, rural livelihoods, sanitation and hygiene, health, personal safety, road and public transport safety, renewable energy, clean cooking, assistive devices, and biodiversity-friendly infrastructure.

Sr. No.	Major Theme	Number of Ideas
1	Agriculture	3
2	Food Processing	6
3	Rural Livelihoods	4
4	Health	4
5	Personal Safety	3
6	Assistive Devices	3
7	Water, Sanitation and Hygiene (WASH)	7
8	Road and Public Transport Safety	5
9	Lifestyle	4
10	Waste Management and Circular Economy	2
11	Renewable Energy and Clean Cooking	1
12	Biodiversity-Friendly Infrastructure	1
	Total	**43**

Figure 7 - Thematic Classification of 43 INSPIRE-MANAK Project Ideas:

The variety of themes indicates that the students are using their surrounding environments to find problems which could be dealt with by means of practical and locally suitable solutions. The topics relating to water, sanitation, agriculture, and waste management show that account has been taken of ordinary resource use and the needs of the community. In the same way, the projects about assistive devices and personal safety show a concern with enhancing accessibility, convenience, and well-being. Moreover, the ideas pertaining to renewable energy and biodiversity-friendly infrastructure point to opportunities of linking scientific education with environmental sustainability.

This matches what Vincent-Lancrin et al. (2019) said about the need to foster creativity and critical thinking by using educational methods which enable students to come up with ideas, look at them and improve them. The OECD (2024) has also pointed out that creative thinking involves more than just coming up with an idea; learners must be given the chance to assess different possibilities, work on solutions and enhance their own work. In this connection, the projects under consideration offer a possible basis for experiential learning, scientific reasoning and design-based problem-solving.

It does not follow that the wide variety of topics covered in the nominations proves that all the proposed ideas are scientifically original, technically achievable, or effective; further evaluation is needed through

idea screening, prototype development, testing, and feedback.

4. The relevance for mentoring and the implementation of the programme

Together, the findings show two closely related needs for the INSPIRE MANAK Award Programme to increase its participation in the Government Ashram Schools: better administrative support and stronger academic mentoring. The fact that 60% of schools are participating indicates the need for a systematic follow-up procedure, while the 43 student nominations show that ideas could be developed with properly structured support.

A school-level mentoring system could help students identify the problems they want to tackle, examine current solutions, understand relevant scientific principles, and create simple prototypes. Teachers could receive support through orientation sessions and easy-to-access guidance materials, and district-level coordinators could maintain a school-level tracking system for registration, documentation, nomination completion, and follow-up actions. Arranging the activities in line with the school calendar, festivals, vacations, and administrative duties would also help to minimise unnecessary delays.

The evidence shows that the students at the Government Ashram School in Jalgaon are coming up with ideas which are based on practical and community-related matters. The next stage should ensure these ideas receive continuous technical advice, opportunities to experiment, and support in developing prototypes. These steps will help turn students' creativity into deeper scientific understanding, stronger practical problem-solving skills, and more meaningful involvement in innovation programmes.

Scope for Study

Research into the INSPIRE-MANAK programme in the Yawal Block could examine students' participation levels, nomination patterns, and selection outcomes over a longer period to detect changes in the representation of tribal and non-tribal schools. Studies comparing different blocks in Maharashtra could examine differences in participation among Ashram schools, Zilla Parishad schools, and other school types. Further research could also investigate the role of teachers, school headmasters, parents, and educational administrators in identifying students' innovative ideas and supporting their involvement. Special attention should be paid to the difficulties tribal students face, such as limited awareness, limited access to resources, few mentoring opportunities, and insufficient institutional support. Longitudinal studies could assess whether participation in the INSPIRE-MANAK programme enhances students' scientific curiosity, creativity, problem-solving skills, and self-confidence. This research would help identify effective ways to implement the programme and shape policies that make it more inclusive, accessible, and responsive to the educational needs of students in tribal areas.

Conclusion

Research on the INSPIRE MANAK Awards Programme in the Yawal block of Jalgoan district, Maharashtra, shows the importance of fostering a scientific attitude, creativity, and innovation among school students. Through the INSPIRE-MANAK Programme, students can identify problems in their environment, develop innovative ideas, and suggest solutions that meet local and societal needs. The study stresses the value of innovation at the school level in promoting scientific thinking, problem-solving skills, and the practical application of knowledge.

Student participation in the schemes helps link classroom learning with real-life experiences, allowing them to investigate local issues in agriculture, water conservation, environmental protection, health, and everyday technologies. Yet the successful implementation of the scheme relies on a number of factors,

including teacher guidance, students' and parents' awareness, access to learning resources, institutional support and the opportunity to develop and present innovative ideas. Schools in rural and geographically disadvantaged areas may need extra support in order to guarantee equitable participation.

The results indicate that the innovation programme should not consist merely of the submission of ideas but should also promote experimentation, mentoring, the development of prototypes and the practical application of the students' innovations. Furthermore, the scheme's impact can be increased by strengthening collaboration among schools, teachers, parents, educational authorities, and scientific institutions. In general, INSPIRE MANAK has great potential for fostering an inclusive environment and a culture of innovation and scientific inquiry and for enabling the students in Yawal PO to become creative thinkers who can make a meaningful contribution to local development and to wider societal programmes.

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